

*E-01345A-13-0069*ORIGINAL

From: Doug & Judy Staab

15805 North 45<sup>th</sup> Place Phoenix, AZ 85032 RandOEIVED

3439 Limestone Way Pine, Arizona 85544

2013 NOV 20 P 3: 35

To:

**Arizona Corporation Commission** 

Commissioners Wing 1200 West Washington Phoenix, AZ 85007-2996 AZ GORP COMMISSIO DOCKET CONTROL

Arizona Corporation Commission DOCKETED

NOV 2 0 2013

DOCKETED BY

November 1, 2013

NOTICE AND DEMAND FOR USE OF EITHER INDUSTRY STANDARD OWNER INSTALLED TOU METER MODULE OR WHOLE HOUSE ENERGY MONITORING SYSTEM FOR ACCESS TO UTILITY SAVINGS PLANS, PURSUANT TO LETTER SENT TO YOU ON FEBRUARY 12, 2013

To Arizona Public Service Company and all agents, officers, employees, contractors and interested parties:

- 1) This Notice and Demand pertains and applies only to *Arizona Public Service Company* herein "UTILITY SERVICE PROVIDER" and it's electric services provided to the addresses: at 15805 North 45<sup>th</sup> Place, Phoenix, AZ., 85032 (which is an "Energy Efficient" certified home by UTILTY SERVICE PROVIDER). The letter sent on February 12, 2013 is still in effect for the property located at 3439 Limestone Way, Pine AZ.
- 2) It has come to our attention that UTILITY SERVICE PROVIDER has chosen to financially burden and deliberately punish all those who have refused a Smart Meter, by charging these customers the highest rate structure available, in direct violation of 15 USC subsection 45, 15 USC subsection 2, ARS 40-334, ARS 44-1376.03, ARS 44 Chapter 10 article 1 and ARS 44-1402. Any consumer who has had UTILITY SERVICE PROVIDER remove the new "Smart Meter" and replace it with a safe analog mechanical meter, has had UTILITY SERVICE PROVIDER discriminately refusing to offer the consumer any other rate plan which will meet the public needs and offer them the same savings as offered to those on the Smart grid by fixing the price, which is also in violation of the Section 2 of the Sherman Anti-trust Act.
- 3) Therefore, UTILITY SERVICE PROVIDER is hereby requested to allow use of an industry standardized TOU Meter (installed at no cost to UTILITY SERVICE PROVIDER) to monitor usage on a 24/7/365 basis, thereby giving customer access to UTILTY SERVICE PROVIDERS cost saving plans. Further, customer will install a whole house electric monitoring system to track actual usage and compare UTILITY SERVICE PROVIDERS charges to actual use. TOU industry standard monitoring systems are readily available in order to become eligible for the savings offered to everyone else except those being deliberately discriminated against by UTILITY SERVICE PROVIDER.

- 4) UTILITY SERVICE PROVIDER has failed to disclose to either the Arizona Corporation Commission, the public at large, or end user that there are alternative ways using Industry Standardized Time of Use devices and/or modules to monitor and measure Time Of Use (TOU) on a 24/7/365basis, which would provide UTILITY SERVICE PROVIDER and those who have chosen a safe analog meter to participate in all UTILITY SERVICE PROVIDERS money saving power plans in accordance with ARS 40-334.
  - **NOTE:** Per the attached information, the TED 5000-C energy monitoring system is fully capable of providing the UTILITY SERVICE PROVIDER information in the following formats: 60 minutes of Second-data, 2 days of Minute-data, 90 days of Hourly-data, 24 months of Daily-data, and 10 years of Monthly-data. The real-time and historical data can be viewed on any computer utilizing the TED Footprints software (Windows, Mac, and Linux compatible and would be made available to the UTILITY SERVICE PROVIDER). Additionally, UTILITY SERVICE PROVIDER could connect to the Gateway to access the data from any computer or mobile device with Internet access, thus eliminating the need for having to send a meter reader.
- 5) UTILITY SERVICE PROVIDER by its single source discriminate rate plan limitation (which constitutes price fixing under the law) have cost consumers electric rate charge increases in excess of 240% from previous rate plans available. UTILITY SERVICE PROVIDER has denied them access to any other rate plan by their choosing to have a safe analog mechanical meter installed on their home for health reasons. This is in direct violation of both ARS 40-334, and Section 2 of the Sherman Anti-trust Act.
- 6) However, all information provided on the letter sent on February 12, 2013 with the exception of this authorization remains in effect. Wereby we still revoke and deny any and all implied, expressed and/or recorded consent, if any exists, for the placement and operation of any "Smart Meter" or Digital Electric Meter that transmits a RF signal and all other utility metering devices which emits any electromagnetic radiation (herein "EMR"), or which "monitor" or conduct surveillance, or make recordings of any events and activities within private property that we may occupy, or that may be upgraded to do those things.
- 7) "Smart Meters" and certain other Digital Electric utility meters with RF/microwave transmitting capability still meet the statutory definition of unlawful surveillance devices put forth as "Wiretapping" in United States Code (USC) Title 18, Part 1, Chapter 119, Sec 2511, 2512—Arizona Revised Statutes Title 13, Criminal Code Chapter 30, sections 13-3005, 13-3006 and 13-3008 as well as other State and Federal laws, these "Digital Electric Meters and "Smart Meters" are designed and intended to record personal and private events and activities within private structures and properties which constitutes violation of the United States Constitution, Bill of Rights, 4<sup>th</sup> Amendment guaranteeing all people to be "...secure in their persons, houses..." and to be free of "search". No search of private property may be lawfully done without a valid, timely and ratified court order (warrant) based on probable cause. Also, because electromagnetic radiation is known to cause cancer and other diseases and injuries installation of any meter with either an EMR transmitter, a switching mode power supply, a transformer or similar devices on a private residence without consent of the occupants and property owner constitutes Assault under United States Code Title 18, Section 113. To attempt the installation of such devices on virtually every private structure is quite clearly criminal misconduct on the part of all those associated and complicit with that attempt. That criminal misconduct causes nullification of all

contracts, easements and policy and entitles any property owner, tenant and occupant, in lawful self defense, to remove all such devices immediately without notice, application or administrative process. That criminal misconduct also eliminates any and all right of UTILITY SERVICE PROVIDER to charge any fee or penalty or prescribe and terms or conditions in relation to the property owner's actions to mitigate UTILITY SERVICE PROVIDER's violations and to protect all occupants' health, safety and privacy. That criminal misconduct is committed by UTILITY SERVICE PROVIDER and therefore, UTILITY SERVICE PROVIDER has no grounds to deny utility service in retaliation for any action a utility customer deems necessary for self defense.

- 8) RF transmitting type "Digital Electric Meters", "Smart Meters" and all digital wireless utility meters emit "packetized" and/or "pulsed" electromagnetic radiation in power densities, timings and volumes known to be harmful and unsafe for exposure to humans, animals and plants, shown to be damaging and dangerous in thousands of published peer-reviewed scientific studies, and known to be particularly harmful to individuals classified as "Sensitive Receptors" who may visit or occupy the above property. This radiation is known to cause cancer, neurological illnesses and injuries, birth defects, childhood leukemia, childhood behavioral disorders and a wide variety of other physical symptoms. In fact, exposure to EMR can exacerbate any vulnerability and provoke injury in any physiological body. The widespread installation of digital electric meters represents reckless and inexcusable endangerment of the public and violation of rights.
- 9) RF transmitting type "Digital Electric Meters", "Smart Meters" and all digital wireless utility meters contain "switching mode power supplies" which consume electricity at customers' expense and are known to disrupt incoming current sine waves and emit "dirty electricity" also known as "electromagnetic smog" also known as "electromagnetic radiation" using structural wiring and grounded plumbing as antennae. This EMR pollution is in volumes known to be unsafe for exposure to humans, animals and plants, has been shown to be damaging and dangerous in thousands of published peer reviewed scientific studies, and is known to be particularly harmful to individuals classified as "Sensitive Receptors" who may visit or occupy the above property. Therefore, installation of these digital electric meters is undeniably an endangerment to the public and particularly to occupants of property installed with those meters.
- 10) UTILITY SERVICE PROVIDER has not disclosed the frequencies, volumes, power values, qualities and exposure levels of radiation the digital meters emit, and has not disclosed whether those frequencies could cause harm to animal, human or plant tissues, and has not disclosed at what proximities such harm could occur and has not offered any warranty, claim or indemnification against any negative effects of the meters on its customers as negative effects are known and reported regularly. Digital meters do have switching mode power supplies and transmitters, they do disrupt household current integrity and therefore must be harmful at some locations for some duration of exposure, yet no limits are disclosed by UTILITY SERVICE PROVIDER in reckless disregard for the health and safety of the public.
- 11) UTILITY SERVICE PROVIDER Has not disclosed or obtained consent from customers with regard to what data will be collected by its digital meters on personal and private activities on private property, where that data will be stored, who will access that data, how that data will be shared and managed, how the subjects of that data can be assured of their privacy, how they can review and correct any errors, how

that data will be secured, how victims of privacy invasion or mishandling of private data will be compensated and restored and how UTILITY SERVICE PROVIDER claims to have gained the unconstitutional authority to record, collect, store and distribute private and personal data taken from utility customers without informed consent. Utility customers have generally not granted permission for such surveillance, nor have they been properly and fully informed of it. Even if UTILITY SERVICE PROVIDER may claim to keep data "safe" which is statistically not possible, UTILITY SERVICE PROVIDER itself has no consent to collect and hold personal information, so personal is not "safe" having been exposed to parties within UTILITY SERVICE PROVIDER who have not been permitted to collect and view that data.

12) UTILITY SERVICE PROVIDER may claim a historical easement (right of access) to connect an analog mechanical meter (only) to the electrical service of the above addresses for the purpose of recording and billing total electrical usage once per month. UTILITY SERVICE PROVIDER DOES NOT have easement to monitor activities and events INSIDE THE HOME, and does not have easement to transmit electromagnetic radiation FROM, ON, IN AND THROUGH THE ABOVE PROPERTIES, and affected parties have not knowingly or willingly granted or permitted any such easement or access and, if any such permission is presumed or claimed, all such permission is hereby denied. UTILITY SERVICE PROVIDER is therefore in violation of its easement as of this notice and has no right, authority, privilege or consent to place or operate a "Digital Electric Meter" or "Smart Meter" or any radiation emitting or monitoring device on our properties and/or place of occupancy, and all such devices must be removed immediately from our properties and replaced with safe and lawful analog mechanical meters that have no capability of surveillance or emission of radiation.

<u>Understand that you may not install or operate any radiation emitting monitoring device on these</u> properties regardless of any damage or harm that device may or may not cause.

- 13) As qualified, rightful, authorized and interested parties we do hereby demand the immediate removal of all transmitting type "Digital Electric Meters and "Smart Meters", switching mode power supplies, radiation emitting devices and surveillance/monitoring devices from our property and place of occupancy as they violate Laws and statutes (above) and our rights and we have full authority as property owners and/or occupants to refuse any such device. Because UTILITY SERVICE PROVIDER has threatened and implied intention to install unlawful devices on our property, we must approve in advance with fully informed written consent, the installation, operation and control of all equipment, systems, methods and policies that may affect ourselves and our property, which may emit electromagnetic radiation or which may cause or allow data to be collected and records made of private and personal activities on our property.
- 14) UTILITY SERVICE PROVIDER is hereby demanded and expected, within 21 days to allow information provided by a whole TOU monitoring system to be accepted so that alternative rate structures discriminatorily denied to the home owner can be implemented.
- 15) If, within 21 days of delivery of this notice, UTILITY SERVICE PROVIDER fails to allow and accept the information provided by a whole house TOU monitoring system which has the capability to gather time-of-day electrical usage information from the property as a means to be provided access to UTILITY SERVICE PROVIDERS alternate rate savings plans, then information will be forwarded to

seek legal redress. No Digital Electric Meter or Smart Meter will be acceptable even though it has no capability to be upgraded or that is "upgradable" to gather and record individual instances of electrical consumption, and have no capability or "upgradable" capability to emit electromagnetic radiation, we will, in self defense, lawfully and rightfully remove the offending meter and replace it with a safe and legally compliant non transmitting ""Digital Electric Meter", rated and calibrated to common metering standards and you will be required to calculate billing from the readings provided by that meter under the plan of which we have agreed to. By failing to correct the problems represented above UTILITY SERVICE PROVIDER has lost any real or presumed authority, right, privilege or permission to impede, discourage or penalize our mitigations of it's violations and must accept the data provided by our replacement device without recourse. We will record and report electric usage measurements from the meter being removed and we will return it to UTILITY SERVICE PROVIDER, again, at UTILITY SERVICE PROVIDER's expense. At no time will we attempt to use power without paying for it or in any way attempt to prevent UTILITY SERVICE PROVIDER from receiving fair compensation for the energy it provides. During our replacement of the digital meter, when our house main and/or breakers are turned off, and current loads have been removed from the meter, if the meter registers electrical usage or consumption, UTILITY SERVICE PROVIDER and its officers may be subject to charges of commercial fraud and theft. Consumption of electricity by the meter itself, which we are presumably being billed for, has not been disclosed or approved by us, and is theft. UTILITY SERVICE PROVIDER executives will be held personally responsible for any such theft and fraud.

- 16) If UTILITY SERVICE PROVIDER fails or refuses to timely comply with this demand as stipulated above we are then entitled, in lawful self defense, to damage and/or destroy any locks that may impede our removal of that meter, and we may not be held responsible for any damage to the Meter or any related equipment upon its removal and delivery to UTILITY SERVICE PROVIDER and we will return the offending meter and parts to UTILITY SERVICE PROVIDER on a schedule convenient and acceptable to us if UTILITY SERVICE PROVIDER chooses to receive it. Any hesitation to accept and sign for return of UTILITY SERVICE PROVIDER's digital meter will be indication that UTILITY SERVICE PROVIDER has abandoned claim of that meter and its value, if any exists.
- 17) If UTILITY SERVICE PROVIDER fails or refuses to timely (21 days or less as stipulated above) comply with this demand for replacement of the Digital Electric Meter or Smart Meter, we are entitled to be reimbursed and made whole by UTILITY SERVICE PROVIDER for all costs of time, expenses, equipment, materials, services, consultations, deliveries, risks, nuisances, frustrations, medical examinations, medical treatments, losses and damages and violations of rights incurred by the effects of the digital meter and the replacement of the digital meter with a safe and lawful analog mechanical meter of our choosing. UTILITY SERVICE PROVIDER is liable for all costs associated with our demands for removal, the removal of, and return of the digital meter/s to UTILITY SERVICE PROVIDER, and for reimbursement of all costs of collection and pursuit of same and a penalty assessment for having caused us necessity to handle the meter replacement ourselves when it is clearly the responsibility of UTILITY SERVICE PROVIDER to have done so upon this Notice and upon any request.
- 18) If UTILITY SERVICE PROVIDER fails or refuses to timely (21 days or less as stipulated above) comply with this demand for meter replacement and/or fails to rebut all points herein with facts, evidence, truth and law with a sworn statement (affidavit) by a fully identified, responsible and qualified

officer of UTILITY SERVICE PROVIDER, then UTILITY SERVICE PROVIDER and all of its Directors, Administrators, Managers, employees, installers, contractors and agents are presumed given this notice and thereby agree with, and acquiesce to all terms, conditions, declarations, assertions, representations, claims and statements in this notice without recourse and are liable for all costs, damages and injuries caused by the violating devices and the mitigations that we may deem necessary.

- 19) If UTILITY SERVICE PROVIDER refuses, obstructs, evades or withholds cooperation in our delivery and/or return of the removed equipment and parts, that will represent that UTILITY SERVICE PROVIDER has no claim or interest in those items and that the parts and equipment may be retained or discarded by us by any method and at any time of our choosing.
- 20) To assure fair and accurate billing we will include a report of the date and time of the meter replacement and the final readings on the digital meter removed and UTILITY SERVICE PROVIDER must then rely on the readings of the meter we provide. We are not attempting, nor do we expect to, avoid payment for any electricity at any time and UTILITY SERVICE PROVIDER has no reason to allege or suspect any unlawful activity on our part. All actions and intentions expressed in this notice are defensive, lawful, rightful, harmless and consistent with all laws, lawful contracts and easements with the understanding that UTILITY SERVICE PROVIDER's violations have caused it to lose all written, presumed and implied rights and privileges of easement, contract and policy.
- 21) Owner will also install a whole house electric usage monitoring system to verify actual time of usage and power consumption of this residence. This system will provide a comprehensive printout 24/7/365 of all power consumption used under the TOU Noon to 7 plan or any other plan. Any deviation from the usage data provided by UTILITY SERVICE PROVIDER and the use being monitored will be back-charged against UTILITY SERVICE PROVIDER as a credit to the owner. Results of the bill received and the power used will be forwarded to all appropriate regulatory agencies and the Arizona Attorney Generals office if fraudulent charges for power consumption are found.
- 22) We are making no attempt to avoid obligations to pay for electric service at any time and this Notice may not be construed to suggest or imply any such attempt and/or wrongdoing and/or breach of contract. Any contract that may exist regarding easement to maintain an electric meter on our property does not to our knowledge, and may not, provide easement for radiation emissions and surveillance or monitoring of private activities on the property without our express consent which is hereby denied. All existing power usage plans are to remain in place as agreed upon when service was initiated at these locations
- 23) All points in this Notice, unless timely (see above) rebutted by fact and law by a responsible, authorized and liable party with first-hand knowledge in a written and sworn rebuttal, are binding and forceful upon UTILITY SERVICE PROVIDER and all it's employees, officers, executives, agents, operatives, contractors and assigns. Rebuttal must be point by point and supported by fact and law and issued from an identified and authorized party. A general denial is not sufficient to diminish the force and effect of this notice and its points. Rebuttal of any point herein does not effect or diminish the binding force and effect of any other point herein. After agreeing to the terms above timely by affirmative response or by failure to timely and factually rebut any point herein, UTILITY SERVICE PROVIDER has then and

thereby agreed that it may not remove, damage or tamper with the analog mechanical meter that we have installed or will install at a time of our choosing nor may it take any action to discourage or prevent any mitigations we deem necessary against it's unlawful, unsafe and harmful digital or smart meter. The replacement analog mechanical meter (if not replaced by the UTILITY SERVICE PROVIDER) is our property and possession and may not be tampered with without our informed consent. We will report monthly readings according to paragraph 29 below if UTILITY SERVICE PROVIDER does not wish to do on-site visual readings. All visits and actions by UTILITY SERVICE PROVIDER personnel or officials to and upon our property must be made by appointment at a time of our convenience and with our express approval. All purposes for that visit must be stated in advance and will be supervised by us or our representative. Any activity or presence on our property by UTILITY SERVICE PROVIDER personnel or agents not approved by us in advance will constitute criminal trespass and violation of law, and law enforcement will be summoned with request to take all trespassers into custody under formal report of criminal violation.

- 24) The style and design of the meter chosen by us or by UTILITY SERVICE PROVIDER for measuring our utility service does not, will not and cannot be construed to constitute an emergency or a reason for entry on our property without permission by appointment. Any analog mechanical meter that, by our judgment, accurately and safely measures total monthly power usage is an adequate and acceptable device for UTILITY SERVICE PROVIDER's billing purposes and UTILITY SERVICE PROVIDER may not make any claim, or demand otherwise.
- 25) Our Whole House Energy Monitoring system, uses industry standard current transformers to measure usage on demand, and is accurate, and standard, and that model has been in service for many years and does not require any additional "certification". We assure and guarantee the accuracy and standard function of the system we install. We are fully responsible for any errors in measurement by our meter. Any challenge to our system's accuracy must be accompanied by firm evidence of same.
- 26) Installation of <u>any</u> radiation-emitting surveillance device is criminal misconduct and has nullified all right, privileges and provisions of UTILITY SERVICE PROVIDER's easement. This notice now represents terms of easement. If UTILITY SERVICE PROVIDER tampers with, damages or removes the analog electric meter UTILITY SERVICE PROVIDER has installed, or displaces, damages or trespasses upon any property in our possession, by doing so UTILITY SERVICE PROVIDER agrees to pay \$100,000.00 per incident, due and payable at the time of the tampering, damage, removal or trespass, and must replace all equipment and property to our satisfaction at UTILITY SERVICE PROVIDER's expense and must pay additional costs and charges for any delay, complications and nuisance to us or our tenants and occupants as we may record and present for reimbursement or payment.
- 27) If our equipment and property is tampered with, damaged or removed by UTILITY SERVICE PROVIDER and is not replaced to our satisfaction on the day of tampering, damage or removal, UTILITY SERVICE PROVIDER agrees to pay, at that time, an additional \$50,000.00, payable and due 24 hours from the time of tampering, damage or removal. Unpaid balance on all amounts due will accrue interest at the maximum rate allowable by law, and UTILITY SERVICE PROVIDER will be fully liable and obligated for reimbursement of all costs and expenses of collection as those costs may be

incurred by us.

- 28) We hereby rescind and revoke any part or provision of any prior or other contract, easement, agreement and/or covenant, written, spoken, implied or presumed which may be in conflict with, or additional to, the terms, conditions and representations herein. The installation of a radiation-emitting and/or surveillance device on our property is criminal misconduct and therefore has caused UTILITY SERVICE PROVIDER's loss of right of easement, right of contract and right of policy. As of the time of the unlawful installation of a radiation-emitting and/or surveillance device on our property this document constitutes the only, and the supreme terms of agreement between ourselves and UTILITY SERVICE PROVIDER for purposes of providing utility services. Terms of easement are as follows:
  - a) UTILITY SERVICE PROVIDER must make an appointment to enter our property. Any unannounced entry will be criminal trespass with exception of meter reading only if required.
  - b) UTILITY SERVICE PROVIDER must state all reasons for entry (other than monthly meter reading only) to the property prior to entry.
  - c) UTILITY SERVICE PROVIDER must secure our affirmative approval for that entry and those purposes.
  - d) All UTILITY SERVICE PROVIDER personnel will be supervised by us while on our property, for any activity other than meter reading.
  - e) If any activity takes place on our property not approved by us, law enforcement will be called with request to take UTILITY SERVICE PROVIDER personnel into custody under formal allegations and complaints of criminal trespass.
  - f) The sole and only exception is for the UTILITY SERVICE PROVIDER to read (and read only) the monthly usage data from the analog mechanical meter should they choose to do so. NO other access is authorized or approved as stated above.
- 29) This notice gives UTILITY SERVICE PROVIDER fair notice and time to replace our analog mechanical meter with a safe and lawful Itron Digital Electric Meter model C1STwithout RF transmitting capability and that does not transmit data electronically. If UTILITY SERVICE PROVIDER fails to do so timely it is endangering our health, safety and rights, and we are then entitled to any reasonable action in self defense. In self defense we are entitled to violate the law if necessary and be held innocent of those violations. In the case of our self defense UTILITY SERVICE PROVIDER may not object to, or interfere with our choice of analog mechanical meter and may not deny any essential public utility service in retaliation.
- 30) Some utility companies complain that they no longer have resources to read meters on site. It is common practice, when meters are impractical to read on site, such as in rural locations, for the utility customer to call or write in and report the meter reading to the UTILITY SERVICE PROVIDER once per month. We are willing and able to report our meter readings monthly so that UTILITY SERVICE PROVIDER does not have to perform field service to read our meter. UTILITY SERVICE PROVIDER may, by

appointment, visit our property up to twice per year to verify our reports. Unless other agreeable arrangements are made, we will write our meter reading on our monthly utility bill voucher coupon. We will assume this is agreeable to UTILITY SERVICE PROVIDER unless you request another method of reporting which is acceptable to us.

- 31) Any portion of this Notice not rebutted or disputed with fact and law by a responsible, authorized, sworn and fully identified party within the period allowed above will be valid, forceful and binding upon UTILITY SERVICE PROVIDER and will represent UTILITY SERVICE PROVIDER's full agreement with those terms and conditions. Comments or rebuttals concerning the Itron "Digital Electric Meter" model C1S without RF transmitting capability must be forwarded to the Academy of Environmental Medicine for input and review for accuracy.
- 32) Any portion of this Notice found or thought to be invalid will not affect or diminish the force and power of any other portion.
- 33) Notice to principal is notice to agent and notice to agent is notice to principal. All rights are fully reserved.
- 34) Delivery of this document by Certified mail represents and constitutes legal service.

## **Notice of Entry into Evidence**

35) This Notice and Demand shall be entered into evidence in any civil or criminal proceeding that may arise in connection with the subject matter set forth herein and will supersede any document not authored and sworn by an authorized, qualified, responsible and liable party.

This Notice and demand is issued by the following authorized properties owner and/or occupant:

Printed:	Doug Staab		
And signed:	ASH		
Date:	1/1/12		
Dute.	14412		-

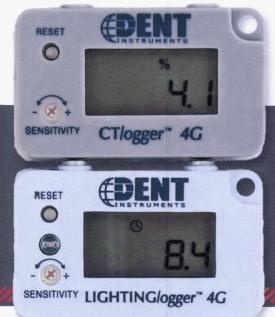
Cc: Bonnett, Fairbourn, Friedman & Balint, P.C.

Arizona Attorney General's Office - Consumer Fraud Division

Arizona Attorney General's Office – Criminal Division Arizona Corporation Commission – Utility Division Arizona Corporation Commission – Commissioners

U.S Justice Department – District of Arizona Federal Bureau of Investigation – Phoenix office





## **SMARTLOGGERS™**

ON/OFF TIME-OF-USE INSTRUMENTS

MEASURE TOTAL-ON TIME AND ON/OFF TRANSITIONS OF ALMOST ANY DEVICE



## **FEATURES**

- Instantly see what your logger has recorded. All
   SMARTloggers™ come with a 5-digit LCD showing On-Time (in hours) and Percent On.
- With a storage capacity of over 32,000 records,
   SMARTloggers™ can record unattended for months or years.
- Simple mounting using power rare earth magnets, Velcro®, or screw hole easily secures the instruments out of sight.
- Interfaces with SMARTware™ Windows® software package for easy data retrieval and simple, sophisticated data analysis.
- Compact and rugged, the SMARTloggers<sup>™</sup> are designed for provide many years of service in a variety of operating conditions.
- Five-year battery life.
- Three-year warranty.

Lights

Motors

Water Heaters

Gas Valves

Switches & Relays

Virtually any electric load

## **SMARTLOGGER™** SPECIFICATIONS

LOGGER TYPES	LIGHTING: Internal Photo Sensor MAG: Internal Magnetic Field Sensor CT: External Current Transformer CONTACT: External Switch or Relay			
DISPLAY	5 Digit LCD showing Total On-Time, Percent On, On/Off Annunciator			
TIME STAMPS	Month, Day, Year, and Hour, Minute, Second			
TIME STAMP RESOLUTION	1 Second			
MINIMUM EVENT ON/OFF CAPTURE	0.5 Hz (2 seconds)			
DATA ANALYSIS	Statistics, summaries, graphs, and data export using <b>SMART</b> ware™ software			
MEMORY	32,576 records. Ring memory plus separate On-Time Totalizer			
SENSITIVITY	LIGHTINGlogger: Adjustable MAGlogger: 40 mGauss minimum CTlogger: 0.25 amp minimum CONTACTlogger: Dry Contacts			

## **COMMUNICATIONS**

COMMUNICATION	USB with <b>SMART</b> logger Communications Cable		
MECHANICAL			
OPERATING TEMPERATURE	0° to 60°C (32° to 140°F)		
OPERATING HUMIDITY	5% to 95% non-condensing		
BATTERY LIFE	5 years		
INTERNAL CLOCK	Real-time, crystal controlled, true calendar, 20 ppm accuracy (<1 minute/month)		
WEIGHT	40 gm (1.5 oz)		
DIMENSIONS	6.3 x 3.8 x 1.9 cm (2.5" x 1.5" x 0.75")		
MOUNTING	Rare earth magnets, Velcro®, or mounting hole		
WARRANTY	Three Years		

## **SMART***WARE*: EASY DATA ANALYSIS

- All SMARTloggers use SMARTware Windows-based software that makes it easy to analyze and visually present recorded data.
- Monitor usage trends with the click of a mouse.
- Pre-programmed graphs and analysis functions make understanding your data simple.
- Easily export usage data into other popular spreadsheet and database programs.
- Extremely flexible to accommodate a wide range of measurement needs.

# NEED ANSWERS TO ENERGY QUESTIONS?

The **SMART***logger* TOU series of instruments are designed to monitor the On/Off status, Time-of-Use operating schedule, and Total On-Time for energy consuming devices and systems. Models are available for lighting systems, motors, relays and switches, and virtually any electric load. The non-contact monitoring makes installation simple. Each of these small, robust instruments provide power data for superior energy management.

## FOUR MODELS AVAILABLE:







# E2 CLASSIC

WIRELESS ENERGY MONITOR



SAUE UP TO 20% OFF YOUR ENERGY BILL\*







- Download your energy data to your PC / Mac
- Instantly see the cost of using energy in your home
- View your daily, weekly, monthly or average data
- Uses multiple tariff options including weekends off peak
- Automatically changes between seasonal tariff structures
- Discover and reduce your carbon footprint

Shop for Efergy products online at: www.PowerMeterStore.com 1.877.766.5412

# E2 CLASSIC

## ENERGY MONITORS - HOW THEY WORK

Our e2 classic energy monitor is simple to install and easy to use. Two small sensors are clipped on to the supply cables. A lead from the sensors and a mains adaptor are plugged into the energy transmitter, which then wirelessly sends real time data to the energy monitor. The monitor receives the data and displays the demand in kilowatts of energy being consumed at any given time. The e2 classic may be programmed for various rates, ensuring that the cost of your energy is accurate.



## **INSTANT SAVINGS**

The e2 classic updates every 10, 15 or 20 seconds. The display then shows how much energy is consumed at that moment and how much it will cost if the 'energy now' load is maintained for a period of one hour.



## **DOWNLOAD YOUR DATA**

Download your energy consumption data to your Mac or PC and analyse it with our efergy elink software. View informative graphs, print or save reports as PDF files. Data may also be viewed using Excel.



## **AVERAGE DATA**

.......

The e2 classic displays your average energy usage per day, week and month. See the impact of your energy efficient efforts, and then watch your average energy usage reduce.



## **MEMORY FUNCTION**

The e2 classic memory function allows you to view your energy usage by the hour, day, week or month. The e2 classic helps you understand your energy usage and how it changes over time.





## **EASY TO INSTALL**

## **TECHNICAL INFORMATION**

Transmission Range Voltage Range Measuring Current

e2 classic EF010 433MHz 10, 15 or 20 Sec 230 - 328ft (40 - 70m) 100 - 600V 50mA - 200A (max)

Testing Standards

CSA - UI - FCC

The backlight will be activated from 18:00 to 6:00 hours











Shop for Efergy products online at: www.PowerMeterStore.com 1.877.766.5412

# 30 Series Quick Start Guide

Display Set up. (Optional Display for "C" Models)

- A.) Plug Display AC/DC power supply into a 120V outlet. For ease of set up, temporarily locate it where you can view both your computer and Display simultaneously.
- B.) Plug power supply cable into the back of Stand.
- C.) Carefully insert Display into Charging Stand.
- D.) After 15 seconds, remove Display from Charging Stand and re-insert. This will engage the battery charging system. It will be fully charged in 24 hours.
- E.) Note the Display ID Code located on the back of the display and write it below:

## Display ID Code:

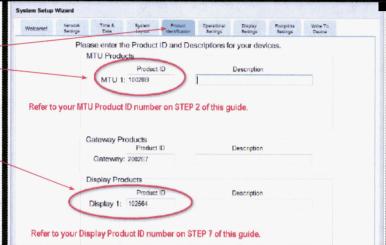
- F.) Once you enter Display information in the Footprints software (Step 8), relocate the Display to desired location.
  - 1.) Display should be kept close to Gateway for best reception.
  - 2.) There should be no metal, block, brick, or concrete walls between Gateway and Display. Generally, wood and sheetrock do not cause interference.
- G.) Under System Settings Wizard, click on "Display Settings" to change screen options.

## FP Rootprints Software Setup

- A.) Go to the following link to download the TED 5000 Installation Application: www.theenergydetective.com/install-program
- B.) Plug the Ethernet Cable into the Gateway.
- C.) Plug other end of the Ethernet Cable into your Internet Router. If you don't have a router, it may be plugged directly into your computer. If you plug the Gateway into your computer, you may need to change the IP Address. We highly recommend that you plug the Gateway directly into your router.
- D.) Open an Internet browser. (Internet Explorer, Firefox, Google Chrome)
- E.) Type the following address in the browser address bar: http://TED5000
- F.) This will open the Footprints Software program. You can view live dashboard data, modify system setup, modify/set utility rates, and update Gateway, MTU, or Display firmware.
- G.) If you have problems connecting to the Gateway, contact your network service provider or IT professional.

### Configure Product IDs

- A.) From EDIT Menu at top of Footprints Screen:
  - 1.) Choose System Settings Wizard.
  - 2.) Click on Product Identification Tab.
  - 3.) Type in your MTU ID(s) as shown in image to right.
    - a.) For multiple MTUs, select the "System Layout" tab first and select the correct number of MTUs.
    - b.) You will then identify what each MTU is measuring. (i.e. Load, Generation, Adjusted-Load, Stand-Alone)
  - 4) Your Gateway ID will auto-fill.
  - 5.) Type in your Display ID(s) (for "C" models).
- B.) Click on "Write to Device" Tab.
- C.) Click Update button and settings will be written to the Gateway. Do not exit until progress bar is complete.
- D.) Click Finish. The screen will automatically refresh.
- E.) Kilowatt readings should now be seen on the Footprints dashboard and (optional) Display.
- F.) Rates can be customized by following the directions in Step 10.



### Utility Rate Wizard Setup

### NOTE: IT WILL BE VERY HELPFUL TO HAVE YOUR MOST RECENT ELECTRIC BILL HANDY

- A.) From Edit Menu at the top of Footprints screen:
  - 1.) Choose Utility Settings Wizard.
  - 2.) Click on Utility Rate Setup Tab.
- B.) Enter Meter Read Date. The date may fluctuate from bill-to-bill by a couple of days. Do not change the date each month, as the next monthly bill will likely adjust for it.
- C.) Enter in the number of energy rate seasons (Summer, Winter, etc.) that your utility uses. If none are used, enter "1."
- D.) Click on Plan Type Tab.
  - 1.) Select your tariff rate structure: Flat, Tiered, Time-of-Use, or Tiered and Time-of-Use.
  - 2.) Click Next to enter Utility rates.
- E.) Once Utility rates are entered, click on Additional Charges Tab.
- F.) Select any additional charges that are applied to your monthly utility bill, including taxes and/or surcharges.
- G.) Select Write to Device tab and then click the Update button.

## **Export Data**

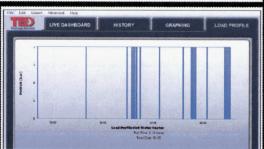
NOTE: TED 5000 STORES AND EXPORTS SECONDS, MINUTES, HOURS, DAYS, AND MONTHLY DATA INDEPENDENTLY.

- A.) Select Export tab from top of dashboard.
- B.) Select the data you wish to export.
- C.) If you have multiple MTUs or a Solar/Wind Installation, the data for each MTU is separate.
- D.) The exported file will be in CSV format (viewable on most all spreadsheets).
- E.) Open the CSV file to view the selected data. (See image below)

	A	В	C	D	E	F	G	Н
1	mtu	date	power	cost	min pwr	min pwr time	peak pwr time	"min cost"
2	1	10/18/2010	-15.321	-1.73	-2.486	15:11	2:57	-0.28
3	1	10/19/2010	-15.687	-1.77	-2.901	12:44	7:10	-0.32
4	1	10/20/2010	-16.771	-1.89	-2.412	13:11	7:11	-0.27
5	1	10/21/2010	-16.099	-1.82	-2.373	13:02	5:30	-0.26
6	1	10/22/2010	-6.556	-0.74	-1.658	16:11	5:20	-0.18
7	1	10/23/2010	-12.576	-1.42	-3.058	13:42	5:20	-0.34
8	1	10/24/2010	-11.134	-1.26	-2.557	14:06	5:20	-0.28
9	1	10/25/2010	-14.948	-1.69	-2.425	14:00	0:12	-0.27
10	1	10/26/2010	-15.856	-1.79	-2.385	12:49	1:10	-0.26

## Create Load Profile for a Specific Device in the Home NOTE: DEVICE SHOULD BE A LARGE APPLIANCE IN THE HOME

- A.) From Edit Menu at top of Footprints Screen:
  - 1.) Choose Load Profile Wizard.
  - 2.) You can track up for 5 devices. Select "Add" next to a blank device.
  - 3.) Name the device a unique name, such as "HVAC" or "Pool Pump".
  - 4.) If you have multiple MTUs, select the MTU that the device is measured under.
  - 5.) Most devices have only one Start/Stop stage, however, some devices, such as some HVAC systems, have multiple start-up stages. You may select up to three start/stop stages.
- 6.) Adjust the Percent Error to avoid false-positive readings. The default percentage is 10%.
- B.) For best results, turn off as many appliances as possible prior to setting up Load Profiles.



## Shop for TED products online at: www.PowerMeterStore.com 1.877.766.5412

- F.) You can now click on the Load Profile Tab from the main Dashboard to view Load data.
- G.) You can view each device independently. (See image to the right)

- Need Additional Help with Installation or Troubleshooting? 1.) View additional support documents and online support forum. www.theenergydetective.com/support
- 2.) View Installation and Troubleshooting Videos. Installation: www.theenergydetective.com/video Troubleshooting: http://www.theenergydetective.com/troubleshooting

NOTICE - IMPORTANT: TED 5000 series is only suitable for use on 120/240V single-phase 60Hz services. TED is only suitable for services of 200 Amps or less, or 400 Amps with parallel 200A fee TED is only suitable for services with maximum 350 MCM conductors. If you have a 3-phase or 230V 50Hz electrical service, TED 5000 will not work. Visit www.theenergydetective.com/support for more deta se 60Hz services. TED is only suitable for services of 200 Amps or less, or 400 Amps with parallel 200A feet



Identify the components in your TED package:









Power Cable Gateway for MTU



Ethernet Cable



**Display Recharging** 

Stand



Optional Wireless Display

Wireless Display

Low Voltage

Power Adapter





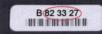
# Transformers

Set of Current

Prepare Breaker Panel

### WARNING: YOU MUST TURN OFF MAIN **BREAKER OR SWITCH**

- A.) Turn off power.
- B.) Remove circuit breaker panel cover.
- C.) Write the ID number of your MTU as shown on the label below. It will be in the form of: Axxxxxx, where "x" is the ID number. You will need to know this number to set up the TED system.



MTU Code:

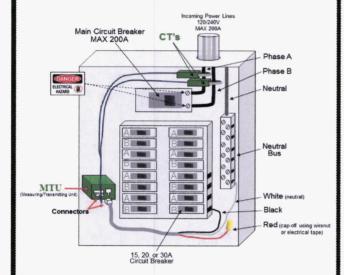
Install the Measuring Transmitting Unit (MTU) to Circuit Breaker

- A.) For increased signal-strength, connect only the black wire from the MTU power cord to a spare 15, 20, or 30 Amp circuit breaker.
- B.) Cap-off or cover the red wire with electrical tape (you will not use the red wire).
- C.) If there is no spare circuit breaker in the panel, the black wire can be attached to any 15, 20, or 30 Amp breaker in the panel. However, the circuit breaker must be approved for two conductors by the "authority having jurisdiction in the installation location
- D.) Connect the white wire to the neutral bus in the panel.

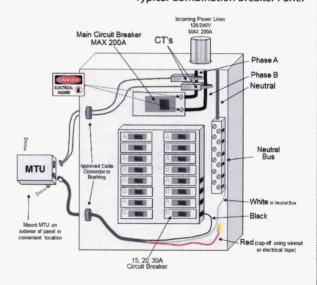


REFER TO EXAMPLES 1 AND 2 BELOW TO VIEW MTU POWER CORD WIRE CONNECTIONS

Installing MTU Inside Panel Typical Combination Breaker Panel



Installing MTU Outside Panel Typical Combination Breaker Panel



Installing and Connecting the Current Transformers (CTs)

- A.) CAUTION IF THIS IS A COMBINATION PANEL, THE LUGS ON THE PRIMARY SIDE OF THE MAIN BREAKER ARE PROBABLY STILL HOT.
- B.) The Current Transformers must be installed with the red polarity dots both facing the source of power. If both CTs are not installed in this manner, the reading will be wrong. NOTE: Do NOT install the CT over the neutral (N) grounded conductor.
- C.) Install one CT over each incoming power conductor, by pressing on the handle to open the split core then clipping it over the power line.
- D.) The CTs should be installed on the secondary side of the main switch or main circuit breaker, however, if this is not possible, such as in the case of a combination breaker panel, then install on the primary side of the main breaker.
- E.) Ensure that the two sides of the split core CTs are mated tightly together over the incoming power line. NOTE: The CTs should be loose-fitting around the wires.
- Connect the CTs and Power Cable to the MTU by plugging the plastic mating connectors together. NOTE: The connectors are polarized and can only be inserted in one way. Do not force.

Mounting the MTU

- A.) Determine the best location to mount the MTU:
  - 1.) Choose a location where it will not interfere with existing equipment or wiring.
  - 2.) The MTU may be attached using double-sided tape (if allowed in your jurisdiction), or with sheet metal or machine screws.
- B.) Arrange and tie-wrap all wiring in a neat and tidy manner.
- C.) Turn the power back on.
- D.) The MTU will blink approximately 10 times when power is first applied.
- E.) After initial blinking, it will blink when transmitting or receiving data.
- F.) Replace breaker panel cover only after installing Gateway and ensuring the entire TED system is operational.

Plug in Gateway to Outlet

**IMPORTANT** 

## Shop for TED products online at: www.PowerMeterStore.com 1.877.766.5412

- outlet connected to any other electronic equipment with an external power supply (such as a laptop or printer.)
- B.) If setting up in a home office, we highly recommend that you purchase a filter to remove noise from your office electronics. You may purchase a filter online at the TED Store under "Accessories."
- C.) The green LED will flash about 5 times when power is first applied.



words, the data transmits over the existing wiring in your home. If, after you have installed your TED correctly and you find that there is no communication between the components, it is very likely a PLC-issue. To resolve this issue, please visit: www.theenergydetective.com/PLC